

MAHATMA GANDHI UNIVERSITY
SCHOOL OF CHEMICAL SCIENCES

PROGRAMME M Sc Chemistry (Polymer Chemistry)

DURATION 2 years (2020 Admission onwards)

Total credits required: 86 (for 4 semesters)

[Core: 64; Elective: 18; Open: 4]

- * The student has to choose **three elective courses** for semester I, **three elective courses** for semester II and **two elective courses** for semester III and **one elective course** for semester IV.
- ** The student has to choose **one open course** of 4 credits for semester III from any other School under the Faculty of Science.
- *** In the evaluation process internal –Continuous Assessment (CA) - accounts for 40% and the End- Semester Examination will account for the remaining 60%.

SEMESTER I

Course Code	Course Title	Hours/Week			Credit
		L	T	P	
<u>Core Courses</u>					
SCSMPC02	Quantum Mechanics and Atomic Structure	2	2	-	3
SCSMPC03	Chemical Thermodynamics and Surface Chemistry	2	2	-	3
SCSMPC04	Equilibrium Statistical Mechanics	2	2	-	3
SCSMPC23	Organic Reaction Mechanisms	2	2	-	3
SCSMPC28	Polymer Chemistry	2	2	-	3
SCSMPC29	Polymer Synthesis Lab	-	-	6	3
<u>*Elective Courses</u>					
SCSMPE53	Supramolecular Chemistry	2	-	-	2
SCSMPE54	Polymer Physics	2	-	-	2
SCSMPE55	Stereochemistry of Organic Compounds	2	-	-	2
SCSMPE77	Elastomers and Fibre Technology	2	-	-	2
SCSMPE78	Polymer Crystallisation	2	-	-	2

SEMESTER II

Course Code	Course Title	Hours/Week			Credit
		L	T	P	
<u>Core Courses</u>					
SCSMPC09	Structural and Solid State Chemistry	2	2	-	3
SCSMPC10	Photochemistry and Pericyclic Reactions	2	2	-	3
SCSMPC19	Physical Chemistry Lab	-	-	6	3
SCSMPC25	Reactions and Reagents in Organic Synthesis	2	2	-	3
SCSMPC30	Theory of Polymer Solutions	2	2	-	3
SCSMPC31	Polymer Testing and Characterization	2	2	-	3

* Elective Courses					
SCSMPE57	Basic Concepts of Non-Equilibrium Statistical Mechanics	2	-	-	2
SCSMPE58	Biochemistry	2	-	-	2
SCSMPE59	Instrumental Methods of Analysis	2	-	-	2
SCSMPE61	Organic Chemistry Lab	-	-	6	2
SCSMPE65	Surface Chemistry and Catalysis	2	-	-	2
SCSMPE79	Polymer Materials	2	-	-	2

III SEMESTER

Course Code	Course Title	Hours/Week			Credit
		L	T	P	
<u>Core Courses</u>					
SCSMPC14	Analytical and Nuclear Chemistry	2	2	-	3
SCSMPC15	Chemical Kinetics	2	2	-	3
SCSMPC26	Advanced Organic Synthesis	2	2	-	3
SCSMPC32	Polymer Blends, IPN and Nano Composites	2	2	-	3
SCSMPC33	Polymer Processing and Testing Lab	-	-	6	3
<u>*Elective Courses</u>					
SCSMPE63	Computational Methods in Chemistry	2	-	-	2
SCSMPE71	Nanomaterials	2	-	-	2
SCSMPE80	Polymer Compounding and Processing	2	-	-	2
SCSMPE81	Specialty Polymers	2	-	-	2
SCSMPE82	Surface Coatings and Paints	2	-	-	2

****Open Courses**

SCSMPO40	Environmental Chemistry	4	-	-	4
SCSMPO41	Science and Creativity	4	-	-	4

SEMESTER IV

Course Code	Course Title	Hours/Week			Credit
		L	T	P	
<u>Core Courses</u>					
SCSMPC45	Research Project	-	-	-	7
SCSMPC46	Project Seminar	-	-	-	3
SCSMPC47	Comprehensive Viva-Voce	-	-	-	3
<u>*Elective Courses</u>					
SCSMPE98	Review Report	-	-	-	2
SCSMPE99	Industry Visit Report	-	-	-	2